

4. (Twice Amended) A service provisioning system [according to claim 2]
for use in providing services in a distributed processing environment, said system
comprising:

- an input connected to a distributed processing environment for receiving a service
request from an entity;
- a response output connected to said distributed processing environment for
providing a response to the entity;
- processing means to process the service request and provide a response thereto and
adapted to decide, based at least in part on data held in the data store, whether to provide
a service, to propose conditions under which the system is willing to provide a service or
to decline to provide a service;
- means to access an up-datable data store for storing parameter(s) indicative of the
available capacity of the system to provide the service; and
- means for scheduling tasks/resources to provide a service;

wherein the processing means is adapted, in response to a failure by the scheduling
means to schedule a task/resource or component service, to:

- reschedule the task/resource/component service;
- transmit a message to the entity that the originally requested service can
only be provided under different conditions;
- relocate the service with another service providing entity; or

indicate to the entity that this service cannot be provided.

5. (Twice Amended) A service provisioning system [as in claim 1] for use in providing services in a distributed processing environment, said system comprising:

an input connected to a distributed processing environment for receiving a service request from an entity;

a response output connected to said distributed processing environment for providing a response to the entity;

processing means to process the service request and provide a response thereto and adapted to decide, based at least in part on data held in the data store, whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

means to access an up-datable data store for storing parameter(s) indicative of the available capacity of the system to provide the service; and

wherein the processing means is adapted, in response to the inability of a resource or component service to be completed successfully, to

reschedule the tasks/service;

transmit a message to the entity that the originally requested service can only be provided under different conditions;

relocate the service with another service providing entity; or

indicate to the entity that the service cannot be provided

6. (Twice Amended) A service provisioning system [as in claim 1,] for use in providing services in a distributed processing environment, said system comprising:

an input connected to a distributed processing environment for receiving a service request from an entity;

a response output connected to said distributed processing environment for providing a response to the entity;

processing means to process the service request and provide a response thereto and adapted to decide, based at least in part on data held in the data store, whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

means to access an up-datable data store for storing parameter(s) indicative of the available capacity of the system to provide the service; and

wherein the way in which the processing means is adapted to make a decision is that the processing means is adapted to:

process a service request by accessing one or more parameters in the data store,
processing the request using the one or more parameters, and
producing a response at the output, which response is selected from indications

that

- a) sufficient capacity is available to provide the service;
- b) insufficient capacity is available to provide the service; and

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- c) ~~sufficient capacity~~ is available to provide the service if modified, together with associated modifications.
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Claim 7, line 2, change "1" to --4, 5 or 6--.

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10. (Twice Amended) A service provisioning system [as in claim 1] for use in providing services in a distributed processing environment, said system comprising:

an input connected to a distributed processing environment for receiving a service request from an entity;

a response output connected to said distributed processing environment for providing a response to the entity;

processing means to process the service request and provide a response thereto and adapted to decide, based at least in part on data held in the data store, whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

means to access an up-datable data store for storing parameter(s) indicative of the available capacity of the system to provide the service; and

[comprising] a request output connected to said distributed processing environment for requesting a component service from another entity.

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15. (Thrice Amended) A service provisioning system [as in claim 1] for use in providing services in a distributed processing environment, said system comprising:

an input connected to a distributed processing environment for receiving a service request from an entity;

a response output connected to said distributed processing environment for providing a response to the entity;

processing means to process the service request and provide a response thereto and adapted to decide, based at least in part on data held in the data store, whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

means to access an up-datable data store for storing parameter(s) indicative of the available capacity of the system to provide the service; and

means arranged to provide more than one instance of a service, and/or of a negotiation for a service, to one or more requesting entities concurrently.

25. (Twice Amended) A service provision system [as in claim 24] for use in distributed processing environments; said system comprising:

an input for receiving a service request;

service request processing means for identifying component processes for use in provisioning the requested service;

negotiation means for use in establishing conditions applicable to provision of those component processes;

an up-datable data store;

means to access said up-datable data store for storing said conditions when established; and

an output for providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein the processing means is adapted to process a service request by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions, and producing said response,

wherein one or more of said established conditions has an associated expiry time for storage in the data store;

wherein the processing means is adapted:

to detect an expired or undefined condition in the data store, which condition is applicable to a component process for the provision of a requested service, and

to trigger the negotiation means to establish a substitute condition.

27. (Twice Amended) A service provision system [as in claim 26] for use in distributed processing environments, said system comprising,
an input for receiving a service request;
service request processing means for identifying component processes for use in provisioning the requested service;

negotiation means for use in establishing conditions applicable to provision of those component processes;

an up-datable data store;

means to access said up-datable data store for storing said conditions when established; and

an output for providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein the processing means is adapted to process a service request by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions, and producing said response,

initiation means to initiate one or more component processes in provision of a requested service; and

wherein:

provisioning a requested service requires provision of a selected set of component processes;

the negotiation means establishes and stores a set of conditions applicable to provision of the component processes of the selected set; and

the processing means is adapted to process a service request by accessing the stored set of conditions in the data store, processing the request using said stored set, and producing said response.

Amend allowed claim 18 to independent format to cure its inadvertent lack of a recited parent claim 1:

18. (Thrice Amended) A distributed computing environment comprising plural systems [as in] , each system being for use in providing services in a distributed processing environment, said system comprising:

an input connected to a distributed processing environment for receiving a service request from an entity;

a response output connected to said distributed processing environment for providing a response to the entity;

processing means to process the service request and provide a response thereto and adapted to decide, based at least in part on data held in the data store, whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

means to access an up-datable data store for storing parameter(s) indicative of the available capacity of the system to provide the service; and

wherein said plural systems are connected by a communications network, wherein at least one of said systems is arranged to provide more than one instance of a service, or of a negotiation for a service, to one or more requesting systems concurrently.

Claim 19, line 3, change "leaving" to --having--.

Cancel claim 21 without prejudice or disclaimer in favor of amended dependent claim 22:

22. (Twice Amended) A method [as in claim 21,] of business process enactment, said method being implemented in a distributed environment including at least one service provider and at least one service requester, said method comprising:

receiving a request at a service provider from any service requester within said environment,

outputting from said service provider a response to said service requester by processing said request to determine said response, accessing an up-datable data store storing parameters indicative of the present capacity of the service provider to provide the service, and

controlling one or more resources in the environment available for use by said service provider, wherein the processing determines the nature of said response on the basis of the data stored in the data store;

wherein, in the event a service provider and a service requester agree a contract to provide and accept a service respectively, a copy of the contract is stored as a data structure representing the terms and conditions of the contract by both the service-provider and the service requester.

Amend dependent claim 24 to self-standing independent format:

24. (Twice Amended) A service provision system [as in claim 23] for use in distributed processing environments, said system comprising:

an input for receiving a service request;

service request processing means for identifying component processes for use in provisioning the requested service;

negotiation means for use in establishing conditions applicable to provision of those component processes;

an up-datable data store;

means to access said up-datable data store for storing said conditions when established; and

an output for providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein the processing means is adapted to process a service request by accessing one or more of the previously established condition sin the data store, processing the request using the one or more established conditions, and producing said response,

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wherein one or more of said established conditions has an associated expiry time
for storage in the data store.

Add new method claims 28-49 (corresponding to apparatus claims 4-20 and 23-27 respectively):

28. A service provisioning method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

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processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

scheduling tasks/resources to provide a service;

wherein the processing is adapted, in response to a failure to schedule a task/resource or component service, to:

reschedule the task/resource/component service;

transmit a message to the entity that the originally requested service can only be provided under different conditions;

relocate the service with another service providing entity; or

indicate to the entity that this service cannot be provided.

29. A service provisioning method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

wherein the processing is adapted, in response to the inability of a resource or component service to be completed successfully, to:

reschedule the tasks/service;

transmit a message to the entity that the originally requested service can only be provided under different conditions;

relocate the service with another service providing entity; or

indicate to the entity that the service cannot be provided.

30. A service provisioning method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

wherein the way in which the processing is, adapted to make a decision is that the processing is adapted to:

process a service request by accessing one or more parameters in the data store,

processing the request using the one or more parameters, and

producing a response at the output, which response is selected from indications that

- a) sufficient capacity is available to provide the service;
- b) insufficient capacity is available to provide the service; and
- c) sufficient capacity is available to provide the service if modified, together with associated modifications.

31. A method as in claim 28, 29 or 30 comprising connecting a control output via said distributed processing environment to one or more tasks and/or resources required to provide the service.

32. A method as in claim 31 wherein the processing is adapted to receive data from the tasks and/or resource(s) for use in updating the data store.

33. A method as in claim 32 wherein said data includes task/resource performance and/or task/resource status data.

34. A service provisioning method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

connecting a request output to said distributed processing environment for requesting a component service from another entity.

35. A service provisioning method, said method comprising:

using a programmed computer to ^{negotiate (A.B.)} negotiating with another entity, in response to a request from said other entity, to provide a service, and

accessing one or more resources available for use by the system to provide a service,

said negotiating including use of a data store containing data relating to a measure of the current capacity to provide a service, and being arranged to negotiate based at least in part on said data to provide a service in response to a request.

36. A method as in claim 35, further comprising updating said data on the basis of past system performance.

37. A method as in claim 35, further comprising scheduling resource(s) for use necessary to provide a service.

38. A method as in claim 37, further comprising initiating the negotiating to re-open negotiation with the entity which requested the service in the event one or more resources cannot be scheduled.

39. A service provisioning method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

providing more than one instance of a service, and/or of a negotiation for a service, to one or more requesting entities concurrently.

40. A method as in claim 35, further comprising:

storing data relating to the services offered and to one or more entities which have an interest in receiving information relating to enactment of one or more of said services,

accessing said stored data in response to a service request and establishing that information should be transmitted to one or more of said entities and

transmitting said information to said entities.

41. A method as in claim 40 wherein said transmitting occurs in the absence of a specific request to transmit the information from the entities.

42. A method for performing distributed computing using plural instances of a method for use in providing services in a distributed processing environment, said method comprising:

receiving a service request from an entity in a distributed processing environment;

processing the service request and providing a response thereto and, based at least in part on data held in the data store, determining whether to provide a service, to propose conditions under which the system is willing to provide a service or to decline to provide a service;

accessing an up-datable data store to store parameter(s) indicative of the available capacity of the system to provide the service; and

wherein said plural instances are connected by a communication network, wherein at least one of said instances is arranged to provide more than one instance of a service, or of a negotiation for a service, to one or more requesting systems concurrently.

43. A distributed computing method as in claim 42 wherein each of said method instances is associated with a plurality of organizations, each of said instances having processing and accessing stored parameters in an up-datable data store in respect of each of its associated plurality of organizations so as to provide a virtual organization.

44. A distributed computing method as in claim 43 wherein the virtual organization exists for a pre-determined period.

45. A service provision method for use in distributed processing environments, said method comprising:

receiving a service request;

identifying component processes for use in provisioning the requested service;

establishing conditions applicable to provision of those component processes;

accessing an up-datable data store and storing said conditions when established;

and

providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein a service request is processed by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions, and producing said response.

46. A service provision method for use in distributed processing environments, said method comprising:

receiving a service request;

identifying component processes for use in provisioning the requested service;

establishing conditions applicable to provision of those component processes;

accessing an up-datable data store for storing said conditions when established;

and

providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein a service request is processed by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions, and producing said response, and

wherein one or more of said established conditions has an associated expiry time for storage in the data store.

47. A service provision method for use in distributed processing environments, said method comprising:

receiving a service request;

identifying component processes for use in provisioning the requested service;

establishing conditions applicable to provision of those component processes;

accessing an up-datable data store for storing said conditions when established;

and

providing a response to the service request, said response comprising an indication of availability of the requested service;

wherein a service request is processed by accessing one or more of the previously established conditions in the data store, processing the request using the one or more established conditions, and producing said response,

wherein one or more of said established conditions has an associated expiry time for storage in the data store;

wherein:

an expired or undefined condition is detected in the data store, which condition is applicable to a component process for the provision of a requested service, and
a substitute condition is established in response to said detection.

48. A method as in claim 45 which further comprises initiating one or more component processes in provision of a requested service.

49. A method as in claim 48 wherein:

provisioning a requested service requires provision of a selected set of component processes;

said negotiating establishes and stores a set of conditions applicable to provision of the component processes of the selected set; and

a service request is processed by accessing the stored set of conditions in the data store, processing the request using said stored set, and producing said response.--